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09/409,947 09/30/99 NIZRI

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EXAMINER

023696

WM02/0927

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego CA 92121-1714

MAIL DETAIL: Y

ART UNIT

PAPER NUMBER

2684

DATE MAILED:

09/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/409,947

Applicant(s)

NIZRI ET AL.

Examiner

Yemane Woldetatos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27, 29-51, 55-59 and 61-74 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 28, 52-54 and 60 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371[©] of this title before the invention thereof by the applicant for patent.

2. Claims 1-5, 9-18, 23, 29-31, 33-40, 42, 44-50, 55, 61- 63, and 65-74 are rejected under 35 U.S.C. 102(e) as being anticipated by Agre (5978679).

Claims 1, 35, 67 and 71. Agre discloses in a mobile wireless telecommunications system, which includes base stations of a first type operating over a first air interface, and base stations of a second type operating over a second air interface, a method for reselection by a mobile station camped on a cell associated with a first base station, which is of the first type, of a second base station, which is of the second type, comprising:

receiving signals over the second air interface from the second base station (Fig. 1 and col. 5 lines 31-36);
evaluating a characteristic of the signals (col. 7 lines 4-21);
responsive to the characteristic, selecting the second base station in place of the first base station on a cell associated with the second base station (col. 7 lines 27-44), and
camping on a cell associated with the second base station (col. 7 lines 52-59).

Claims 2 and 38. Agre discloses a method, wherein one of the first and second air interfaces comprises a TDMA air interface, and the other comprises a CDMA air interface (col. 2 lines 61-65).

Claim 3. The prior art fails to teach a method according to claim 2, wherein evaluating the characteristic comprises applying a CDMA or a TDMA path loss criterion to the signals (col. 5 lines 11-30).

Claims 4 and 39. Agre discloses a method for selecting base stations (col. 5 lines 31-44). Agre does not specifically mention, wherein selecting the second base station comprises applying cell selection and reselection procedures over the CDMA air interface in a manner substantially transparent to a GSM radio interface protocol layer of the mobile station. However, this is inherent in the system.

Claims 5 and 40. Agre discloses a method, wherein while the mobile station is camped on the cell associated with the base station operating over the CDMA air interface, it performs idle mode procedures generally in accordance with a GSM standard (col. 4 line 59 to col. 5 line 11).

Claim 9. Agre discloses a method according to claim 1, wherein receiving the signals over the second air interface comprises receiving signals using a radio transceiver in the mobile station which is also used to receive the signals over the first air interface (Fig. 1 item 101).

Claims 10 and 36. Agre discloses a method, wherein receiving the signals comprises receiving signals in either a GSM or a CDMA signaling mode (see abstract).

Claims 11 and 37. Agre discloses a method, wherein while the mobile station is camped on the cell associated with the first base station, it receives signals therefrom during intermittent active periods of the mobile station, and wherein receiving the signals over the second air

interface comprises seeking and receiving signals during sleep periods of the mobile station intermediate the active periods (col. 4 line 59 to col. 5 line 11).

Claims 12 and 44. Agre fails to mention a method, wherein receiving the signals comprises controlling the mobile station to receive signals over the second air interface responsive to a detected loss of coverage by signals on the first air interface. However, this is inherent in the system.

Claims 13, 15, 45 and 47. Agre discloses a method, wherein receiving the signals comprises initiating monitoring of signals over the second air interface responsive to an indication that a predetermined monitoring criterion has been met (col. 5 lines 11-19).

Claims 14 and 46. Agre does not mention a method, wherein the indication comprises a message broadcast to the mobile station over the first air interface that cells are available over the second air interface. However, this is inherent in the system.

Claims 16, 17, 48 and 49. Agre discloses a method, wherein the mobile station attempts to receive signals from a plurality of candidate cells over the first air interface, and wherein initiating the monitoring comprises initiating monitoring over the second air interface when the number of candidate cells over the first interface are below a predefined level for a predetermined period of time (col. 8 lines 11-31).

Claims 18 and 50. Agre discloses a method, wherein initiating the monitoring comprises initiating monitoring upon expiration of a predetermined time period during which monitoring over the second air interface has not occurred (col. 4 lines 39-58).

Claims 23 and 55. Agre discloses a method, wherein evaluating the characteristic comprises comparing the signals received from the second base station to signals received over

the first air interface from the first base station and applying reselection criteria to the received signals so as to determine whether to select the second base station (col. 7 lines 27-44).

Claims 29 and 61. Agre does not mention a method, wherein comparing the signals comprises performing an assessment of strong neighbor cells when the mobile station is in a border area of coverage provided over the first air interface. However, this is inherent in the system.

Claims 30 and 62. Agre discloses a method, wherein evaluating the characteristic comprises comparing power levels of the signals received over the first and second air interfaces (col. 5 lines 31-44).

Claims 31 and 63. Agre discloses a method, wherein evaluating the characteristic comprises comparing path-loss criteria derived from the signals received over the first and second air interfaces (col. 5 lines 11-30).

Claims 33 and 65. Agre discloses a method, wherein selecting the second base station comprises receiving information broadcast over the first air interface in relation to criteria for interface reselection, and selecting the second base station responsive to the broadcast information (col. 7 lines 22-44).

Claims 34 and 66. Agre discloses a method, wherein selecting the second base station comprises storing information in a memory module of the mobile station in relation to criteria for interface reselection, and selecting the second base station responsive to the stored information (col. 8 lines 9-21).

Claim 42. Agre fails to mention a mobile station as in claim 41, wherein the radio resources management protocol layer comprises parallel GSM and CDMA protocol sublayers

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and a combiner sublayer which selects either the GSM or the CDMA operating mode, which is inherent in the system.

Claims 68 and 72. Agre discloses a method, wherein evaluating the characteristic of the signals comprises applying a threshold criterion to the signals, such the threshold for reselection is higher when the second cell belongs to a different location area from the first cell that when it belongs to the same location area (col. 8 lines 9-21).

Claims 69, 70, 73 and 74. Agre discloses a method, a means for determining the location of cells from the received broadcasted pilot signals (col. 4 lines 39-58).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 24-27, 32, 57-59, 61 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agre.

Claims 24-27 and 56-59. Agre fails to disclose a method, wherein applying the criteria comprises weighting measured characteristics of the signal responsive to a predetermined air interface preference and the preference is set by a user or by a network and the mobile station stores a record of the preference. However, Agre discloses means for setting preferences (col. 7 lines 27-31). Therefore, it would have been obvious to one of ordinary skill in the art to add to

Agre a means for setting a criteria responsive to a predetermined air interface preference, and means for setting preference by the user or by a network and means for storing a record of the preference in order to enhance means for system controls.

Claims 32 and 64. Agre does not mention a method according to claim 1, wherein selecting the second base station comprises selecting a base station responsive to selection by the mobile station of a public land mobile network with which to communicate. However, official notice is taken that Public Land Mobile Network is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to include PLMN in Agre's disclosure in order to enhance user access.

5. Claims 6 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agre in view of Raith et al. (5768267).

Claims 6 and 41. Agre does not disclose a method, wherein selecting the second base station in place of the first base station comprises using a single radio resource management protocol layer in the mobile station supporting both GSM/TDMA and CDMA operating modes. However, Raith teaches radio resource management protocol (col. 8 lines 10-15). Therefore, it would have been obvious to one of ordinary skill in the art to modify Agre by adding radio resource management protocol as ought by Raith in order to maintain standards.

6. Claims 19 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agre in view of Rikkinen et al. (6031827).

Claims 19-22 and 51-54. Agre does not teach a method according to claim 1, wherein receiving the signals comprises regulating energy expended by the mobile station in receiving the signals responsive to a desired level of energy consumption by the mobile station. However,

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Rikkinen teaches means for regulating power (col. 7 lines 9-22). Therefore, it would have been obvious to one of ordinary skill in the art to modify Agre by Rikkinen by adding means for power regulation in order to save battery life.

Allowable Subject Matter

7. Claims 7, 8, 28, 43, and 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 7. The prior arts fail to teach a method according to claim 6, wherein the radio resource management protocol layer comprises parallel GSM and CDMA protocol sublayers and a combiner sublayer which selects either the GSM or the CDMA operating mode.

Claims 28 and 60. The prior arts fail to teach a method according to claim 23, wherein applying the criteria comprises applying a predetermined hysteresis factor so as to prevent recurrent reselection of the air interface.

Claim 43. The prior art fails to teach a mobile station, wherein the combiner sublayer receives messages from a mobility management protocol layer at a service access point in accordance with GSM standards, and maps the messages to primitives which it directs to the selected GSM or CDMA sublayer.

Response to request for reconsideration

8. Applicant's arguments in the request for reconsideration filed on 7-16-01 has been carefully reviewed and is found to be moot in view of the cited reference.

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The applicant argues that the cited reference of Agre does not provides different signals through the different interfaces. However, the examiner believes that Agre's reference clearly teaches different plurality of base stations being connected to networks of different types, that is, CDMA and GSM-TDMA systems as is claimed in the application (see Fig. 1 items 100 and 102 and col. 3 lines 28-31). Therefore, in response to the applicant's argument, the examiner believes that the rejected claims are not in condition for allowance at this time.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yemane Woldetatos whose telephone number is 703-308-9596. The examiner can normally be reached on Monday thru Friday: 9-18:30, off 1st Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter can be reached on 703-308-6732. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-6306 for regular communications and 703-308-6296 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Yemane Woldetatos




Examiner

Art Unit 2684

yw

September 17, 2001



DANIEL HUNTER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600